Forward-looking maintenance for industrial fans

Fan from Piller GmbH

Although automatic fault signalling systems which report a machine or system failure by SMS, fax or e-mail reduce maintenance effort, they can still not prevent a production failure. Systems that continuously gather status information about the machine status and which report irregularities which are an indicator of an increased fault probability by modem, the Internet or GSM radio offer an unequally sustained value and quality enhancement.

In cooperation with Piller Industrieventilatoren GmbH, ECKELMANN has developed such a forward-looking diagnostic and signalling system. Extensive commissioning and service experience was incorporated into data acquisition and analysis software which detects all hints of an impending fan standstill in good time.

The system consists of a data acquisition computer that was specially developed by ECKELMANN and a highly precise sensor system for acquisition and analysis of important machine data. The system constantly determines the usual characteristic value in accordance with DIN and ISO, for example total vibration and selective vibration values and compares these against specified basic data from the first commissioning and the standards. If a trend or limit value is exceeded, an alarm is sent to the Piller service centre by data transfer or e-mail, where the cause is analysed. Among other things, this makes it possible to detect wear and tear, soiling and irregularities resulting from operation in good time.

Thanks to this intelligent diagnostic concept, manufacturers can offer optimum services and almost 100 percent machine availability. The machine maker's maintenance team can check the operating data regularly via a remote access and, if everything is regular, can announce the next service interval plenty of time in advance. In the event of an irregularity, thanks to the automatic warning the machine maker can offer the operator a maintenance appointment in good time and can remedy a malfunction before there is a need for hectic emergency deployments because of machine and production failure.